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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,159

05/08/2006

Shinji Yamamoto

Q87739

9114

65565 7590 06/12/2009  
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EXAMINER

LEE, RIP A

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

06/12/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/533,159	<b>Applicant(s)</b> YAMAMOTO ET AL.	
	<b>Examiner</b> RIP A. LEE	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7,9,13,14,17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7, 9, 13, 14, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05-11-09;01-09-09;10-16-08</u>                                | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 16, 2009 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ryntz *et al.* (U.S. 6,605,656).

Ryntz *et al.* teaches preparation of a thermoplastic polyolefin alloy comprising polyolefin, polyamide, and about 5 wt % of filler to increase stiffness or modulus (claims 9-18). Compositions are prepared using standard melt kneading methods (col. 6, lines 16-35). Silica is disclosed as a desirable filler (col. 5, line 47), and it may be surface treated with aminosilane or 3-methacryloylpropyl trimethoxysilane (col. 5, line 55). Inventors prescribe in the most preferred embodiment use of wollastonite filler having particle size in the range of 3-9  $\mu\text{m}$  (col. 5, line 53). While the working examples do not show thermoplastic polyolefin alloys containing silica as filler, it would have been obvious to one having ordinary skill in the art to make such a composition using melt kneading because Ryntz *et al.* teaches that use of silica is equally desirable. The person of ordinary skill in the art would have been motivated to use silica in order to prepare compositions having useful tensile properties. One of ordinary skill in the art also would have found it obvious to incorporate silane coupling agent to improve affinity of silica with the thermoplastic matrix. While particle size of silica is not described, one of ordinary skill in the art would have found it obvious to use silica having particle size on order of 3-9  $\mu\text{m}$  since this particle size appears to be optimized for maximum dispersibility.

5. Claims 7, 9, 13, 14, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto *et al.* (JP 11-106570) in view of Segal (U.S. 4,207,373).

Yamamoto *et al.* teaches a composition comprising 90-40 parts by weight (pw) of a polyolefin, 10-60 pw of polyamide fiber, and silane coupling agent (abstract). The ratio of polyolefin to polyamide lies well within the range of 1:1 to 9:1, as recited in the instant claims. Silane coupling agents are disclosed in paragraph [0013], and they are identical to those taught in the instant specification. Compositions contain reinforcing filler such as "white carbon," which is silica; paragraph [0025]. Working examples do not show compositions containing reinforcing filler, however, it would have been obvious to one having ordinary skill in the art would have found it obvious to use white carbon filler as suggested in order to impart mechanical strength to

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the resin composition. In summary, it would have been obvious to one having ordinary skill in the art to make the composition recited in the instant claims.

As to the process of making said composition, Yamamoto *et al.* teaches melt-kneading of the polyolefin, the polyamide fiber, and the silane coupling agent. This process takes place in a Banbury mixer, a kneader, a kneader-extruder, shaft kneading machine, or an open roll (paragraph [0018] and [0019]). One of ordinary skill in the art making the composition of Yamamoto *et al.* comprising silica as reinforcing filler would have found it obvious to melt-kneading the filler with the other ingredients in order to disperse the filler into the resin.

Yamamoto *et al.* does not specify a particular amount of reinforcing filler, however, one having ordinary skill in the art would have found it obvious to use an amount sufficient to impart the reinforcing effect, but not in excess that the composition can not be processed and extruded. Segal teaches that mechanically strong and impact resistant fiber reinforced polyolefin compositions have been prepared using an optimized amount of 10-60 wt % of siliceous filler (abstract, col. 2, lines 20-25, col. 3, lines 22-26). The combination of references would have suggested to one of ordinary skill in the art to use the optimized amount of filler in Segal for making a filler reinforced composition of Yamamoto *et al.*, and one would have expected this quantity to be sufficient to impart a reinforcing effect without impairing melt processing of the composition. Therefore, it would have been obvious to one having ordinary skill in the art, in absence of any showing of criticality or unexpected results, to use 10-60 wt % of silica filler in the composition of Yamamoto *et al.*, and one of ordinary skill in the art would have expected the combination of teachings to work with a high degree of success.

Yamamoto *et al.* is also silent with regard to particle size of the filler. However, one of ordinary skill in the art, in absence of any showing of criticality or unexpected results, would have found it obvious to use silica having an average particle size of 0.5-30  $\mu\text{m}$  as taught in Segal (col. 3, line 28).

As to the process of making said composition, Yamamoto *et al.* teaches melt-kneading of the polyolefin, the polyamide fiber, and the silane coupling agent. This process takes place in a Banbury mixer, a kneader, a kneader-extruder, shaft kneading machine, or an open roll (paragraph [0018] and [0019]). One of ordinary skill in the art making the composition of

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Yamamoto *et al.* comprising silica as reinforcing filler would have found it obvious to melt-kneading the filler with the other ingredients in order to disperse the filler into the resin.

### ***Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 7, 9, 13, 14, 17, and 18 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 of Yagi *et al.* (U.S. Patent No. 7,041,726). Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant method results in formation of substantially the same composition of the claims of the prior art.

Claims of Yagi *et al.* recite a polyamide ultrafine fibers-dispersed resin polyolefin composition comprised of polyolefin, polyamide fibers, silane coupling agent and silica particles (claim 1) such that polyamide fibers are comprised of silica particles (claim 2). The content of silica particles falls within the range of 1-100 parts by weight, relative to 100 parts by weight of polyolefin (claim 3). The ratio of polyolefin to polyamide fibers is 1:1 to 9:1 (claim 4), and preferably 4:1 (claim 5). Claims do not recite particle size of silica particles. The relevant

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portion of the prior art is located in column 6, line 12 which teaches that inventive compositions contain silica particles having a particle size between 1 nm and 100  $\mu\text{m}$ . Thus, the composition of the prior art is, indeed, substantially the same as that produced by the instant process.

Applicant's attention is drawn to MPEP § 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F. 2d 1017, 157 USPQ 370 (CCPA 1986). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970).

8. Claims 7, 9, 13, 14, 17, and 18 are directed to an invention not patentably distinct from claims 1-5 of commonly assigned U.S. 7,041,726 for the same reasons set forth in previous paragraph 7.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned U.S. 7,041,726, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned *at the time the invention in this application was made*, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

***Conclusion***

9. Rejection of claims over Yamamoto *et al.* (JP 11-106570), set forth in paragraphs 4 and 5 of the final office action dated August 15, 2008, have been withdrawn in view of claim amendment. The obviousness-type double patenting rejection set forth in paragraphs 7 and 9 of the previous office action have also been withdrawn in view of claim amendment. New grounds of rejection over amended claims have been presented herein.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

/Rip A. Lee/  
Examiner, Art Unit 1796

June 9, 2009